

CLAIMS

1. An isometric/dynamic exercising apparatus comprising a harness (50) which extends over both shoulders (22) of the user (2) and which are anchored to a supportive surface (1) on which the user supports his/her feet, wherein the apparatus includes adjustment means (431) for selectively adjusting the distance between the supportive surface and that part of the harness (50) which acts on the user's shoulders, so that the user can exert an exercising or loading force between the support surface and the harness by straightening his/her body to an upright position, characterized in that the apparatus includes a loose, portable bottom plate (1) which forms said support surface, said bottom plate (1) having room for the user's feet in a central plate-part (20); in that the harness (50) includes two first flexible, elongated power transmission elements (51, 52) whose respective ends are fastened to a first and a second attachment device (44, 56) on the rear side and the chest side of the user respectively, essentially in the symmetry plane of the user; in that a first flexible power-transmission device (58, 59) is connected to the plate forwardly of said foot position (20), wherein the first device (58, 59) is connected to a attachment device (57) located in the user's symmetry plane; in that a power-transmission device (70) including a load measuring device (71) is connected between attachment devices (56, 57) located on the front side of the user; in that a second flexible power-transmission device (40, 41) is connected to the bottom plate (1) rearwardly of the user's foot position (20); in that the second power transmission device (40, 41) is connected to a third attachment device (42) which is located in the user's symmetry plane on the rear side of the user; in that a power transmission element (43) is connected between the third attachment device (42) and the first attachment device (44), wherein the power transmission element (43) is

provided with adjusting means (431); and in that the first and the second power transmission devices (58, 59; 40, 41) have together in the bottom plate a total of at least three attachment points (11-14) that define the corner points of a surface area on the plate (1), wherein the plate area intended for the user's feet (20) lies inwardly of the edge of the polygonal area defined by said corner points.

2. An apparatus according to Claim 1, **characterized** in that the plate (1) has a generally convex rear edge (16).

3. An apparatus according to Claim 1 or 2, **characterized** in that the plate (1) has side edges (17, 18) that are generally straight and parallel with an intersection line between the user's symmetry plane and the plate (1).

4. An apparatus according to Claim 2 or 3, **characterized** in that the convex rear edge of the plate (1) has a polygonal shape and is composed of generally straight edge-parts.

5. An apparatus according to any one of Claims 1-4, **characterized** in that the first device (58, 59) includes two power-transmitting elements (58, 59) that are connected to the plate (1) at two laterally separated attachment points on each side of an intersecting line between the plate (1) and the user's symmetry plane (30); and in that the second device (40, 41) includes two power-transmitting elements that are connected to the plate (1) at two laterally separated attachment points on respective sides of an intersection line between the plate (1) and the user's symmetry plane (30).

6. An apparatus according to any one of Claims 1-5, **characterized** by a measuring device (71) connected in the apparatus for measuring the tensile force exerted by the user when stretching his/her body, said measuring device

preferably supporting a display (72) that can be positioned so as to enable the user of the apparatus to see the display.

7. An apparatus according to any one of Claims 1-6,
5 **characterized** in that the apparatus is essentially non-stretchable and is functional for isometric training or loading exercises, wherein the adjustment device can be adjusted to permit the back and leg muscles to be stretched to a maximum load, and wherein the harness prevents the user
10 from standing or lying in an erect position in the apparatus with his/her legs straightened.

8. An apparatus according to any one of Claims 1-6,
15 **characterized** by a flexible spring device (80, 80) which enables the user to straighten his/her body in the apparatus against the force exerted by said spring device, wherewith the apparatus enables dynamic muscle exercises to be performed by the user.

20 9. An apparatus according to any one of Claims 1-8, **characterized** in that the spring device (80, 80) includes a spring means which is included in the apparatus harness on its front side and/or on its rear side.

25 10. An apparatus according to one of Claims 8 or 9, **characterized** in that at least one spring means (80) in the apparatus can be adjusted to establish a selective spring characteristic.